

**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:25 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 540 Const Calendar Day: 933 Date: 29-Mar-2012 Thursday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Intermittent

Shift Hours: 04:30 am 03:00 pm Break: 00:30 Over Time: 02:00

Federal ID:

Location:

Reviewer: Schmitt, Alex

Approved Date:

Status: Submit

**04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge****Weather****Temperature** 7 AM 40 - 50 12 PM 50 - 60 4PM 50 - 60**Precipitation** 0.00"**Condition** OvercastWorking Day ☐ If no, explain:**Diary:**

Dispute

Work description.

- John Lyons, Sami Dauok, Alex Schmitt, Phil Latasa, and myself checked the out to out distance for the cable strands today as John's and my measurements are tabulated below. John and I were responsible for both the north/south sidespans final buy-off/live-adjustment measurements and north/south west-loops today. John assisted me with the measurements and tabulating the data as I took all of the measurements unless otherwise noted. I used the Victor Tree Gauge (#2) to take the out to out measurements of the cable strands. See John's diary for the measurements taken at the west loop since he took all of the measurements at this location of the bridge.

Sami and Phil were responsible for checking the north/south mainspans and the preliminary values for the north/south sidespans. Sami and Phil began their shift at 2:00am since the majority of the cable strands needed to be bought-off on that side of the bridge. John and I started at 5:00am since there was not that many cable strands to be bought-off on our end of the bridge.

All measurements by both crews were reported to Alex who was stationed in the Caltrans conex recording and analyzing the data. When all of the measurements were completed, Alex was responsible for reviewing the measurements with ABF engineer Zach Lauria. See Alex's diary for more details related to the acceptance or rejection of cable strand sag adjustment.

The digital thermometer was used to measure both the ambient and steel temperatures. The green dual thermometer and anemometer was used to check the ambient temperature and wind speed. The steel temperature measurements were taken with the digital thermometer placed on the outer cable strand wires. Wind speeds were also obtained from weather.com at the time of the measurements.

The official sunrise time per weather.com for San Francisco today was at 6:59am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// South Sidespan //

Time = 5:35m

Ambient Temperature = 52.5F

Condition = Cloudy

Wind = S @ 1mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce and John Lyons

| Cable Strand | Steel Temperature (F) | O-O (#2) CT / ABF (mm) | Theor (mm) | CT Delta (mm) |
|--------------|-----------------------|------------------------|------------|---------------|
|--------------|-----------------------|------------------------|------------|---------------|



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Job Name: 04-0120F4 Inspector Name Bruce, Matt Diary #: 540 Date: 29-Mar-2012 Thursday

| | | | | |
|-----|------|-----------------------|-----|-----|
| 1 | 51.9 | Baseline or Zero | 78 | 0 |
| 118 | 50.3 | 543 (-61) = 482 / 484 | 491 | - 9 |
| 119 | 50.5 | 611 (-61) = 550 / 553 | 558 | - 8 |
| 120 | 50.5 | 687 (-61) = 626 / 622 | 625 | + 1 |

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south sidespan. I took all of the measurements while John assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain measurements where the dimension is in () millimeters.

Measurements on the cable strands at this time were done immediately after ABF ironworkers performed a real time or "Live" adjustment on the cable strand. Once the cable strand was adjusted ABF surveyors would take a measurement followed by Caltrans engineers. Numbers amongst the two groups were compared to expedite final buy-off.

// North Sidespan //

Time = 6:04am

Ambient Temperature = 52.5F

Condition = Cloudy

Wind = ESE @ 1mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce and John Lyons

| Cable Strand (mm) | Steel Temperature (F) | O-O (#2) CT / ABF (mm) | Theor (mm) | CT Delta |
|----------------------|-----------------------|---------------------------------|------------|----------|
| 1 | 51.2 | Baseline or Zero | 78 | 0 |
| 117 | 51.3 | 961 (-61) = 900 / 891, 901, 902 | 891 | + 9 |
| 118 | 50.8 | 573 (-61) = 512 / 510 | 505 | + 7 |
| 119 | 50.8 | 627 (-61) = 566 / 572 | 570 | - 4 |

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north sidespan. I took all of the measurements while John assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain all of the measurements where the dimension is in () millimeters. Cable strand number 118 was bearing on the strand below it at the time of measurements.

Measurements on the cable strands at this time were done immediately after ABF ironworkers performed a real time or "Live" adjustment on the cable strand. Once the cable strand was adjusted ABF surveyors would take a measurement followed by Caltrans engineers. Numbers amongst the two groups were compared to expedite final buy-off.

- All of the prescribed measurements for the sidespans were completed at 6:30am and conveyed to Alex. Similarly all of the prescribed measurements for the west-loop were completed at 6:55am and conveyed to Alex. As mentioned in the comments section of the measurement tabulations, live adjustments were performed by ABF ironworkers. An adjustment would be made and then ABF surveyors and Caltrans engineers would measure the cable strand to verify the correct sag adjustment was done before moving on to adjusting another strand.

The east anchorage ironworkers began their shift at 2:00am today and the tower saddle ironworkers began their shift at 5:00am respectively. See Daryoush Bahar's diary for comments, measurements, labor, and equipment at the tower saddle. Daryoush and myself didn't communicate the sag ratio measured lengths today since Phil and Sami took the preliminary measurements on the sidespans. See Saman Soheilifard's diary for comments, measurements, labor, and equipment at the east anchorage.

- Attended the weekly SAS Tailgate Safety meeting at 8:00am.

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Inspector Name Bruce, Matt

Diary #: 540

Date: 29-Mar-2012 **Thursday**

- Gave the calculated coordinates for the cable band position at 48F to Francis O'Malley to check. To reiterate a QA check will be done with the GPS to "unofficially" check the cable band "rough" layout by ABF.

- Continued to review the plans and submittals related to the cable bands. Began to develop the inspection checklist for this item of work. Also helped Tai-Lin Liu with calculations and analysis of the cable band bolt tensioning for a significant portion of the day.